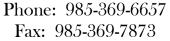


# Texas Brine Company, LLC 1301 Highway 70

Belle Rose, LA 70341





February 11, 2014

Commissioner James H. Welsh P.O. Box 94275 Baton Rouge, LA 70804

#### RE: In response to State of Louisiana Department of Natural Resources Office of Conservation's Second Amendment to Declaration of Emergency and Directive

Commissioner Welsh,

In response to the Second Amendment and Declaration of Emergency and Directive order issued by the Louisiana Department of Natural Resources (LDNR), Office of Conservation on September 25, 2012, Texas Brine Company, LLC (TPC) understands the seven items listed in the document.

In the above mentioned, TBC was specifically directed and ordered to perform certain tasks outlined in the above mentioned document. Below are the required responses, as directed.

- 1. TBC's counsel provided LDNR legal counsel with a response to Directives 1-3 on September 28, 2012.
- 2. TBC understands Directive 4, which is to provide all daily logs and field notes from all contractors conducting investigation into subsidence and natural gas bubbling. The Daily Action Summary and results for current information can be found in the Attachment section of this report.
- 3. TBC understands Directive 5, which directs TBC to immediately allow for split or share any sample taken on site related to Well 3A (Serial Number 974265), the cavern, other wells facilities or other site locations. The Daily Action Summary of today's collection can be found in Attachment section of this report.
- 4. TBC understands Directive 6, which directs TBC to immediately report the results (final and preliminary) of any tests, logs samples or data collection performed on Well 3A, the cavern, other wells, facilities or site locations that indicate a change in any previously known conditions related to the investigation of the subsidence or natural gas bubbling

- events, and continue to report any such results. The Daily Action Summary and the Results related to this Directive can be found in Attachment section of this report.
- 5. TBC understands the Directive 7, which states that TBC will provide a daily summary of all tests, or logs performed or samples taken from Well 3A and the cavern as well as any results of those tests or logs, including preliminary as of September 25, 2012 and going forward. The Daily Summary and Results related to this Directive can be found in Attachment section of this report.

Please note that the drilling rig used for the Observation Well 3A has been removed and the site is being rigged down and returned to pre-drilling condition. As such, daily drilling reports for this well have ceased. Plans are being made for longer term potential gas venting/flaring requirements and possible hydrocarbon material recover from Well 3A.

In addition, previous daily summary reports issued to LDNR have included significant duplicate information as there is a fair amount of overlap in the information requested in each of the Directives included in the September 25, 2012 order. All requested information associated with the Directives issued in the September 25, 2012 order are included in the Attachment section of this report.

TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to <a href="mailto:conservationorder@la.gov">conservationorder@la.gov</a>, ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.

Bruce E. Martin

Vice President, Operations

Bana EMart

Texas Brine Company, LLC



			TBC Oxy Gra	and Bayou Data Manag	gement-Envi	ronmental					
Contractor	Responsibilities	Coll	ected By	Date Collect	ed	Delivered to Lab	Results from Lab	Laboratory	Method	Date to A	Agencies
Sage	Stationary Air Monitoring		nnel onsite, Roxana Red) - 07:00 - 17:00	2/10/2014	ı	NA	NA	NA	NA	2/11/	
	Residential Air Monitoring	bimonthly reside	equested to suspend ential air monitoring. will discontinue these tivities.	NA		NA	NA	NA	NA	N.	A
	Gas Seep Sampling	No wor	k performed	2/10/2014	1	NA	NA	NA	NA	N/	A
	Well Gas Sampling	No wor	k performed	2/10/2014	l	NA	NA	NA	NA	N/	A
	Under Slab Gas Sampling	No wor	k performed	2/10/2014	l	NA	NA	NA	NA	N/	A
	Indoor Air Monitoring	No wor	k performed	2/10/2014	ı	NA	NA	NA	NA	N.	Α
Respec	Inclinometers/Tilt Meters/Transducers	2/10/2014	Instrumentation at IPI- STR-01.	Nick Marnach	NA	NA	NA		NA	NA	NA
-	InSAR Reflector Installations	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Subsidence Survey-Fenstermaker	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
-	Shallow Geophone Installation	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
-	Deep Geophone Installation	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
-	Amendment #3, Directive #2	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
-	Expansion of geoprobe gas sampling locations	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
-	DPVE	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Abandon Casing Survey	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Passive Vent Wells	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	MIHPT	2/10/2014	No work Conducted	NA	NA	NA	NA		NA	NA	NA
Miller	Weekly Stability Survey	K.	Pichoff	February 10, 2	2014	NA	NA	NA	NA	N.	Á
	Misc. Survey Work	K.	Pichoff	February 10, 2	2014	NA	NA	NA	NA	N.	Α
	Sinkhole Hydro/Perimeter Survey		NA	February 10, 2	2014	NA	NA	NA	NA	N.	Α
Pisani	Surface Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
	Sinkhole		NA	February 10, 2	2014	NA	NA	NA	NA	N.	Α
	Industrial Well Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	Α
	MRAA Well Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
	GP/ORW Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
	Cavern Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
	Discharge/Outfall Water		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
	Geoprobe Wells		NA	February 10, 2	2014	NA	NA	NA	NA	N.	A
				Grand Bayou We	ell 3A						
	Daily Operations at 3A					Summary of	of Today's events			-	
						(	Оху ЗА				
	2/11/2014	7:00am 1097.58		2/11/2014	ı						
						Reli	ef Well #1				
	2/11/2014				See OR	W-01 Flare Spread	Isheet (will be pro	vided 1/2/14)	)		



## **Daily Action Summary**

## February 10, 2014

## Sinkhole Perimeter Air Monitoring and Neighborhood Air Monitoring

- The following locations are equipped with solar-powered weather boxes: Pad #9, TR-1a, ORW-11a, ORW-9a, ORW-5, PVW-02, and PVW-BS-56a. And, the following locations are equipped with electrical power: ORW-49-WH, ORW-50-WH, and PVW-03. Thus, daily monitor change-out is no longer necessary for these locations. All monitors will continue to be calibrated and serviced as necessary.
- No Sage personnel onsite.
- Roxana Dubose of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in maintenance of the monitoring equipment as necessary.

NOTE: As discussed on the 02/09/2014 Daily Action Summary, RTU-16, located at TR-1a, recorded elevated LEL readings from approximately 22:20 on 02/09/2014 to 09:08 on 02/10/2014. The highest instantaneous reading recorded was 3.3%. At approximately 09:00 on 02/10/2014, the onsite technician used a handheld instrument to monitor the ambient air at TR-1a. The handheld instrument recorded 0% LEL. The onsite technician calibrated RTU-16 at approximately 09:08, and LEL readings returned to normal.

Monitoring locations ORW-5 and ORW-9a were relocated to ORW-18 and ORW-6, respectively. A monitor location map is attached.

#### **Residential Air Monitoring**

• Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

Not Scheduled

#### **Well Gas Sampling**

Not Scheduled

#### **Under Slab Gas Sampling**

Not Scheduled

#### **Air Indoor Monitoring**

Not Scheduled

	Observation	Relief Well -49 at t	he Well Head	Observation	Relief Well - 50 at t	he Well Head	P	assive Vent Well -5	66	Pa	assive Vent Well -	03	P	assive Vent Well - 0	)2	Obse	ervation Relief We	11 - 58
		ORW-49-WH			ORW-50-WH			PVW-BS-56a			PVW-03			PVW-02			ORW-58	
Date-Time *	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/10/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	21.1
02/10/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	21.1
02/10/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	21.1
02/10/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	21.1
02/10/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 10:00:00 AM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

		Observ	ation Relief	Well -5		Obse	vation Relief We	11 - 18			Observ	ation Relief V	Vell - 9			Observati	ion Relief V	Vell - 6	
			ORW-5				ORW-18					ORW-9a					ORW-6		
		Non-				Non-					Non-					Non-			
		Methane				Methane					Methane					Methane			
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm) VOC (ppr	n) H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm) F	I2S (ppm)	LEL (%)	O2 (%)
02/10/2014 01:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 02:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 03:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 05:00:00 AM	<1.0	<1.0	<1.0	<1.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 06:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	Monitoring at ORW	18 began at 01:5	0 PM on 0	2/10/2014	0.0	0.0	0.0	0.0	20.9	Monitori	ng at ORW-6 b	egan at 01:	45 PM on 02/	/10/2014
02/10/2014 07:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	Wontoning at OK W	·16 began at 01.5	O I WI OII O	2/10/2014	0.0	0.0	0.0	0.0	20.9	Wiomton	ing at OK W-0 0	cgan at 01.	+3 1 WI OII 02/	10/2014
02/10/2014 08:00:00 AM	<1.0	<1.0	0.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9	ļ				
02/10/2014 09:00:00 AM	<1.0	0.0	0.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9					
02/10/2014 10:00:00 AM	<1.0	0.0	0.0	0.0	20.9					0.0	0.0	0.0	0.0	20.9	ļ				
02/10/2014 11:00:00 AM	<1.0	0.0	0.0	0.0	20.9					<1.0	0.0	0.0	0.0	20.9	ļ				
02/10/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9					<1.0	0.0	0.0	0.0	20.9					
02/10/2014 01:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0 0.0		0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM						<1.0 0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM		ORW-5	relocated to	ORW-18		<1.0 0.0		0.0	20.9		ORW-9	a relocated to	ORW-6		<1.0	0.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM						<1.0 0.0		0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM						<1.0 0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM						<1.0 0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9

#### Texas Brine - Belle Rose, Louisiana Hourly Air Monitoring Data Sinkhole Perimeter Monitoring

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

		Observa	ation Relief V	Vell -11			Sc	outh of OG3A	<b>1</b> -1			(	Onsite Traile	rs	
			ORW-11a					Pad #9					TR-1a		
		Non-					Non-					Non-			
		Methane					Methane					Methane			
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
02/10/2014 01:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.9	20.9
02/10/2014 02:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.8	20.9
02/10/2014 03:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.9	20.9
02/10/2014 04:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.9	20.9
02/10/2014 05:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.0	20.9
02/10/2014 06:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.0	20.9
02/10/2014 07:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.8	20.9
02/10/2014 08:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.3	20.6
02/10/2014 09:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	<1.0	20.9
02/10/2014 10:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 01:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

#### Notes:

RTU-16, located at TR-1a, recorded elevated LEL readings from approximately 10:20 PM on 02/09/2014 to 09:08 AM on 02/10/2014. The highest instantaneous reading recorded was 3.3%. At approximately 09:00 AM on 02/10/2014, the onsite technician used a handheld instrument to monitor the ambient air at TR-1a. The handheld instrument recorded 0% LEL. The onsite technician calibrated RTU-16 at approximately 09:08 AM, and LEL readings returned to normal.



Sinkhole Perimeter Monitoring Locations February 10, 2014



	Observation	Relief Well -49 at t	he Well Head	Observation	Relief Well - 50 at t	he Well Head	P	Passive Vent Well -	56	Pa	assive Vent Well -	03	F	Passive Vent Well - (	02	Obse	ervation Relief We	11 - 58
		ORW-49-WH			ORW-50-WH			PVW-BS-56a			PVW-03			PVW-02			ORW-58	
Date-Time *	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/10/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	21.0	<1.0	0.0	20.0	0.0	0.0	20.9
02/10/2014 10:00:00 AM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
02/11/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.7
02/11/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.6

		Observ	vation Relief	Well -5			Observa	tion Relief V	Vell - 18			Observat	tion Relief	Well - 9			Observ	ation Relief V	Vell - 6	
			ORW-5					ORW-18					ORW-9a					ORW-6		
		Non-					Non-					Non-					Non-			
		Methane					Methane					Methane					Methane			
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	OC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm) I	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm) V	OC (ppm)	H2S (ppm)	LEL(%)	O2 (%)
02/10/2014 05:00:00 AM	<1.0	<1.0	<1.0	<1.0	20.9						0.0	0.0	0.0	0.0	20.9					
02/10/2014 06:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9						0.0	0.0	0.0	0.0	20.9					
02/10/2014 07:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9						0.0	0.0	0.0	0.0	20.9					
02/10/2014 08:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	Monitorina	at OPW 1	S began at 01	:50 PM on 0	2/10/2014	0.0	0.0	0.0	0.0	20.9	Monitoring	at OPW 6	began at 01:	45 PM on 02	2/10/2014
02/10/2014 09:00:00 AM	<1.0	0.0	0.0	0.0	20.9	Wiomtoring	; at OK W-1	o ocgan at or	.50 1 WI OH O.	2/10/2014	0.0	0.0	0.0	0.0	20.9	Wiomtoring	at OK W-C	ocgan at or.	+3 1 WI OH 02	710/2014
02/10/2014 10:00:00 AM	<1.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0	20.9					
02/10/2014 11:00:00 AM	<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9					
02/10/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9					
02/10/2014 01:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM		ORW-5	relocated to 0	ORW-18		<1.0	0.0	0.0	0.0	20.9		ORW-9a r	relocated to	ORW-6		<1.0	0.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM		OKW-3	relocated to c	OK W-10		<1.0	0.0	0.0	0.0	20.9		OKW-7a1	iciocaica ic	ORW-0		<1.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/11/2014 01:00:00 AM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9
02/11/2014 02:00:00 AM						<1.0	0.0	0.0	0.0	20.9	]					<1.0	0.0	0.0	0.0	20.9
02/11/2014 03:00:00 AM						<1.0	0.0	0.0	0.0	20.9	]					<1.0	0.0	0.0	0.0	20.9
02/11/2014 04:00:00 AM						<1.0	0.0	0.0	0.0	20.9	]					<1.0	0.0	0.0	0.0	20.9
02/11/2014 05:00:00 AM						<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9

#### Texas Brine - Belle Rose, Louisiana Hourly Air Monitoring Data Sinkhole Perimeter Monitoring

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

		Observ	ation Relief V	Vell -11			Sc	outh of OG3A	<b>1</b> -1			(	Onsite Trailer	rs	
			ORW-11a					Pad #9					TR-1a		
		Non- Methane					Non- Methane					Non- Methane			
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)		H2S (ppm)	LEL (%)	O2 (%)
02/10/2014 05:00:00 AM	41 /	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.0	20.9
02/10/2014 06:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.0	20.9
02/10/2014 07:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.8	20.9
02/10/2014 08:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.3	20.6
02/10/2014 09:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	<1.0	20.9
02/10/2014 10:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 01:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 02:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 03:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 04:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 05:00:00 PM		0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 06:00:00 PM		0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 07:00:00 PM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 08:00:00 PM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
02/10/2014 09:00:00 PM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
02/10/2014 10:00:00 PM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/10/2014 11:00:00 PM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 12:00:00 AM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 01:00:00 AM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 02:00:00 AM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 03:00:00 AM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 04:00:00 AM		<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/11/2014 05:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

#### Notes:

RTU-16, located at TR-1a, recorded elevated LEL readings from approximately 10:20 PM on 02/09/2014 to 09:08 AM on 02/10/2014. The highest instantaneous reading recorded was 3.3%. At approximately 09:00 AM on 02/10/2014, the onsite technician used a handheld instrument to monitor the ambient air at TR-1a. The handheld instrument recorded 0% LEL. The onsite technician calibrated RTU-16 at approximately 09:08 AM, and LEL readings returned to normal.

## **RESPEC Consulting & Services**

Texas Brine, L.L.C.
Assumption Parish, Louisiana
Daily Field Report

Report By:	Crystal Hocking	Date: 2/10/2014
Company:	RESPEC	Job #: <u>2241</u>

Personnel	Company	Job Title
Nick Marnach	RESPEC	Staff Engineer
Peter Smith	RESPEC	Project Geologist

<b>Time Onsite:</b>	Start Time:	7:30	End Time:	11:00
	Start Time:	16:00	End Time:	18:00

## **DAILY ACTIVITY:**

Attended onsite contractor and safety meeting. Peter Smith arrived on site.

## **Instrumentation Program:**

Instrumentation setup at IPI-STR-01 (battery, finalize connections, install ground rod, and add barometric pressure transducer).

## **Other Programs:**

Passive Vent Wells: No Work Conducted by RESPEC.

#### PROPOSED SCHEDULE:

## **Instrumentation Program:**

Configure VDV for IPI's. Install porthole covers and desiccant at IPI-STR-01.

## **Other Programs:**

<u>Passive Vent Wells:</u> Visit PVW monitor wells and download data. Visit GP-56 and schedule barge demobilization. Check pressure on DPVE-26-1 and DPVE-26-3A.

## **ME&A Daily Action Summary**

February 10, 2014

# **Subsidence Survey:**

• Subsidence Survey around Brine Tanks.

# **Sinkhole Perimeter/Hydrographic Survey:**

No Work Done

# **Support Sinkhole Cleanup**

No Work Done

# Misc. Survey Work

- Arrived @ 8:40 am
- Surveyed Settlement Plates
- Surveyed Berm Rods
- Surveyed ORW21 & ORW38 Monitoring Rods
- Surveyed Water Meter Elevations
- Surveyed Elevations Between Well Pad #9 & Well Pad #10
- Departed @ 3:50 pm